

Claims

1. Method for the production of a web of insulating material made of mineral
fibres, in particular from rock wool and/or glass wool, wherein the min-
eral fibres are made from a melt and are deposited onto a conveyor as a
primary non-woven material, the primary non-woven material is dangled
at right angles in relation to the longitudinal extension thereof and is de-
posited as a secondary non-woven material onto a second conveyor, the
secondary non-woven material is then displaced in such a way that the
mineral fibres extend at right angles in relation to the large surfaces of
the secondary non-woven material and the secondary non-woven mate-
rial is subsequently divided into at least two webs of insulating material
by means of a separating cut parallel to the large surfaces of the secon-
dary non-woven material, said webs of material respectively comprising a
large surface and a separating surface which has substantially the same
area as the large surface and which is arranged opposite said large sur-
face,
c h a r a c t e r i z e d i n
that a lamination (39) is applied to at least one of the separating surfaces
(36) of said two webs of insulating material (2).
2. Method according to claim 1,
c h a r a c t e r i z e d i n
that the mineral fibres (3) which in said large surfaces (22, 23) extend
substantially parallel to said large surfaces (22, 23) are removed.
3. Method according to claim 1,
c h a r a c t e r i z e d i n
that said webs of insulating material (2) are fed to a hardening furnace
(30) before and/or after the applying of the lamination (39), in which

hardening furnace (30) a bonding agent already contained in the primary non-woven material (10) is hardened.

4. Method according to claim 1,
c h a r a c t e r i z e d i n

that the separating cut for forming the webs of insulating material (2) is made centrally between the said large surfaces (22, 23) of the secondary non-woven material (18).

5. Method according to claim 1,
c h a r a c t e r i z e d i n

that said lamination (39) is applied as an air-permeable and/or heat-resistant non-woven, woven or two-dimensional structure, in particular from glass and/or natural fibres or organic chemical fibres like e.g. from carbon, aramide, terephthalate, polyamide, polypropylene or mixtures thereof or as a foil, for example an aluminium-polyethylene composite foil, and at least in one layer and particularly in the form of tension-resistant webs.

6. Method according to claim 1,
c h a r a c t e r i z e d i n

that the lamination (39) is applied in several layers, said layers of the lamination (39) being preferably formed differently from each other.

7. Method according to claim 6,
c h a r a c t e r i z e d i n

that the layers of the lamination (39) made of a glass fibre tangled web are connected to layers made of tangled webs from thermoplastic fibres and/or perforated foils from thermoplastic materials.

8. Method according to claim 1,
characterized in
that said lamination (39) is bonded to the web of insulating material (2),
wherein said bonding is preferably effected over a partial area, particu-
5 larly in the form of lines or dots, and wherein for example heat-sealing
adhesives are used.
9. Method according to claim 1,
characterized in
10 that said lamination (39) is formed as an external reinforcement, protec-
tion, filter and/or decorative layer.
10. Method according to claim 1,
characterized in
15 that said lamination (39) is drawn off a roll (40) and is fed together with
the web of insulating material (2) to a processing station (38), where said
lamination (39) is connected to said web of insulating material (2).
11. Method according to claim 10,
20 characterized in
that several layers of said lamination (39) are drawn off a roll (40).
12. Method according to claim 1,
characterized in
25 that bonding agents present in said web of insulating material (2) are ac-
tivated by means of solvents like for example water, prior to being con-
nected to the lamination (39).
13. Method according to claim 12,
30 characterized in

that the activation of said bonding agents is effected by means of contact rollers.

14. Method according to claim 1,
5 characterized in
that said bonding agent is sprayed onto the separating surface (36) of the web of insulating material (2), prior to applying the lamination (39).
15. Method according to claim 1,
10 characterized in
that between said web of insulating material (2) and said lamination (39) a layer of an impregnation, particularly made of a highly viscous dispersion binder or a pigment-filled water-silicate synthetic binder is arranged.
16. Method according to claim 1,
15 characterized in
said impregnation is applied at a high viscosity, so that said impregnation is not absorbed by said lamination (39).
17. Method according to claim 1,
20 characterized in
that said two webs of insulating material (2) are brought together after the application of the laminations (39) and together are supplied to a hardening furnace (30).
18. Method according to claim 17,
25 characterized in
that said webs of insulating material (2) after leaving said hardening furnace (30) are trimmed in the longitudinal direction thereof, are cut to
30 length and are rolled up or divided into single insulation boards and supplied to a packaging station.

19. Method according to claim 1,
c h a r a c t e r i z e d i n
that mineral fibre dust occurring during the separation of the secondary
non-woven material (18) into webs of insulating material (2) are removed
5 and particularly exhausted prior to the application of the lamination (39).
20. Method according to claim 5,
c h a r a c t e r i z e d i n
that said foil is reinforced by a two dimensional glass-fibre netting.
10
21. Method according to claim 5,
c h a r a c t e r i z e d i n
that said aluminium-polyethylene composite foil is heated in such a way
that the polyethylene layer is softened and becomes welded to the min-
15 eral fibre tips of the web of insulating material (2).
22. Method according to claim 1,
c h a r a c t e r i z e d i n
that said lamination (39) is formed of different layers.
20
23. Method according to claim 1,
c h a r a c t e r i z e d i n
that the lamination (39) is formed larger in area than said separating
surface (36), so that said lamination (39) projects especially over at least
25 one longitudinal side of said web of insulating material (2).
24. Method according to claim 1,
c h a r a c t e r i z e d i n
that markings are arranged on said lamination (39) which serve for cut-
30 ting said web of insulating material (2) to length.

25. Web of insulating material made of mineral fibres bound with at least one bonding agent, particularly from mineral wool and/or glass wool, comprising a large surface and a separating surface that is formed at the division of a secondary non-woven material into two webs of insulating material, wherein said mineral fibres in the region of said separating surface are arranged to extend at right angles to the separating surface and in the region of the surface deviating under an angle of 90° in relation to the large surface, in particular parallel to the large surface, and comprising a lamination,
5 characterized in
10 that said lamination (39) is arranged on the separating surface (36).
26. Web of insulating material according to claim 25,
characterized in
15 that said lamination (39) is formed as an air-permeable and/or heat-resistant non-woven, woven or two-dimensional structure, in particular from glass and/or natural fibres or organic chemical fibres like e.g. from carbon, aramide, terephthalate, polyamide, polypropylene or mixtures thereof or as a foil, for example an aluminium-polyethylene composite
20 foil, and at least in one layer and particularly in the form of tension-resistant webs.
27. Web of insulating material according to claim 25,
characterized in
25 that said lamination (39) is formed in several layers, with said layers of said lamination being preferably formed differently from each other.
28. Web of insulating material according to claim 25,
characterized in

that said layers of the lamination (39) made of a glass fibre tangled web are connected to layers made of tangled webs from thermoplastic fibres and/or perforated foils from thermoplastic materials.

- 5 29. Web of insulating material according to claim 25,
 c h a r a c t e r i z e d i n
 that said lamination (39) is bonded to the web of insulating material (2),
 wherein said bonding is preferably effected over a partial area, particu-
 larly in the form of lines or dots, and for example with a heat-sealing ad-
10 hesive.
30. Web of insulating material according to claim 25,
 c h a r a c t e r i z e d i n
 that said lamination (39) is formed as an external reinforcement, protec-
15 tion, filter and/or decorative layer.
31. Web of insulating material according to claim 25,
 c h a r a c t e r i z e d i n
 that between said web of insulating material (2) and said lamination (39)
20 a layer of an impregnation, particularly made of a highly viscous disper-
 sion binder or a pigment-filled water-silicate synthetic binder is arranged.
32. Web of insulating material according to claim 25,
 c h a r a c t e r i z e d i n
25 that the impregnation has a high viscosity, so that the impregnation is not
 absorbed by the lamination (39).
33. Web of insulating material according to claim 26,
 c h a r a c t e r i z e d i n
30 that the foil is reinforced by a two-dimensional glass-fibre netting.

34. Web of insulating material according to claim 25,
characterized in
that said lamination (39) is formed of different layers.
- 5 35. Web of insulating material according to claim 25,
characterized in
that said lamination (39) is formed larger in area than said separating
surface (36), so that said lamination (39) especially projects over at least
one longitudinal side of said web of insulating material (2).
- 10 36. Web of insulating material according to claim 25,
characterized in
that markings are arranged on said lamination (39) which serve for cut-
ting said web of insulating material (2) to length.
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